

TECHNICAL MEMORANDUM

4959-50

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TO: Siegfried Stockinger, Ebasco Services

FROM: Hans Krahn/Douglas Allen, E.C. Jordan

SUBJECT: Estimate of Mass of PCBs in New Bedford Harbor

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This memorandum summarizes the work Jordan has conducted in refining the estimate of PCB mass in the Hot Spot, [Acushnet River] Estuary, and Lower Harbor/Bay that was originally calculated (Technical Memorandum, September 19, 1988).

The estimate of PCBs presented in this memorandum is based upon PCB concentration maps developed by E.C. Jordan. These isopleth concentration maps represent a compilation of data sets from USACE-NED, Battelle-Duxbury, USEPA-83, Woods Hole Oceanographic Institute-82, GCA-82, USCG-82, and DWPC-81.

Data points were plotted on the maps at one foot intervals. Values were estimated when the actual sampling depth overlapped these one foot zones. Sediment concentrations are given based on the USACE grid system, delineating 250x250 foot grids in the Upper Estuary. Each grid was assigned a given PCB concentration, based on an average from data points found within the given grid and those in adjacent grids. Actual PCB volumes were calculated on a dry weight basis.

Where data was lacking in a specific grid, data in adjacent grids alone were used to calculate that grid's concentration. The absence of data became more prevalent with depth and also with distance away from the Hot Spot toward the Coggeshall Street Bridge.

The estimate of PCB mass for the Lower Harbor was derived solely from the isopleth maps generated. An average concentration for a given range of PCBs was used to calculate the PCBs. Individual grids were not used in this effort.

ESTIMATE OF PCB MASS IN NEW BEDFORD HARBOR

AREA	MASS OF PCBS (LBS)	% OF TOTAL MASS
Hot Spot	134,636	45
Estuary (exclusive of Hot Spot)	146,824	49
Lower Harbor	<u>17,000</u>	<u>6</u>
Total:	298,460	100